

CLAIMS

1. A surgical wound retractor comprising:-

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a retracting member for insertion into a wound opening;

a proximal member for location externally of a wound opening; and

a clamp for clamping the retracting member to the proximal member.

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2. A retractor as claimed in claim 1 wherein the proximal member is movable relative to the retracting member to shorten the axial extent of the retracting member for lateral retraction of a wound opening.

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3. A retractor as claimed in claim 1 or 2 wherein the clamp is configured to clamp the retracting member to a proximal surface of the proximal member.

4. A retractor as claimed in any of claims 1 to 3 wherein the clamp is configured to clamp the retracting member to a distal surface of the proximal member.

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5. A retractor as claimed in any of claims 1 to 4 wherein the clamp comprises at least one clip.

6. A retractor as claimed in claim 5 wherein the clamp comprises two or more clips spaced around the proximal member.

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7. A retractor as claimed in claim 6 wherein the clips are equi-spaced around the proximal member.

8. A retractor as claimed in any of claims 5 to 7 wherein the location of the clip on the proximal member is adjustable.
- 5 9. A retractor as claimed in any of claims 5 to 8 wherein the proximal member comprises at least one protrusion, and the clip is configured to clamp the retracting member to the proximal member at the protrusion.
- 10 10. A retractor as claimed in any of claims 5 to 9 wherein the clip is configured to clamp the retracting member from the outer side of the proximal member.
- 11 11. A retractor as claimed in any of claims 5 to 10 wherein the clip is substantially "C"-shaped.
- 15 12. A retractor as claimed in any of claims 5 to 11 wherein the clip is a bulldog clip.
- 13 13. A retractor as claimed in any of claims 5 to 10 wherein the clip comprises a first clip part and a second clip part.
- 20 14. A retractor as claimed in claim 13 wherein the first clip part is an outer clip part and the second clip part is an inner clip part.
- 25 15. A retractor as claimed in claim 13 or 14 wherein the first clip part is configured to overlap the second clip part to enclose a portion of the proximal member.
- 30 16. A retractor as claimed in any of claims 13 to 15 wherein the clip is configured for assembly of the first clip part and the second clip part together.

17. A retractor as claimed in claim 16 wherein the clip is configured for snap-fit assembly of the first clip part and the second clip part together.
18. A retractor as claimed in any preceding claim wherein the proximal member
5 comprises an annular ring means.
19. A retractor as claimed in claim 18 wherein the annular ring means comprises a ring over which the retracting member may be led.
- 10 20. A retractor as claimed in claim 18 wherein the annular ring means comprises an inner ring and an outer ring between which the retracting member may be led.
- 15 21. A retractor as claimed in claim 20 wherein the inner ring defines a projection for location in a complementary recess of the outer ring with the retracting member located therebetween.
22. A retractor as claimed in claim 20 or 21 wherein the inner ring is a relatively loose fit in the recess of the outer ring.
- 20 23. A retractor as claimed in claim 20 or 21 wherein the inner ring is a relatively tight fit in the recess of the outer ring to grip the retracting member therebetween.
- 25 24. A retractor as claimed in any of claims 20 to 23 wherein at least portion of one of the rings is movable from a rest position in which the retracting member is substantially clamped between the rings to a release position in which at least portion of the retracting member is movable relative to the rings.
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25. A retractor as claimed in claim 24 wherein only portion of the retracting member is movable relative to the rings in the release position.
- 5 26. A retractor as claimed in claim 24 or 25 wherein the outer ring comprises a plurality of interconnected segments which are independently movable to facilitate localised release of the retracting member for adjusting the retraction force applied at a wound opening.
- 10 27. A retractor as claimed in claim 26 wherein the ring or segment thereof is manually manipulable between the clamped rest position and the release position.
- 15 28. A retractor as claimed in any of claims 1 to 27 wherein the proximal member comprises one or more anchor formations to which the retracting member may be attached on retraction of a wound opening.
- 20 29. A retractor as claimed in any preceding claim wherein a surface of the proximal member which engages with the retracting member is of a material with a low coefficient of friction.
30. A retractor as claimed in claim 29 wherein the surface is of polytetrafluoroethylene.
- 25 31. A retractor as claimed in any of claims 1 to 30 wherein an inner wound engaging portion of the retracting member comprises a sleeve for lining a wound opening.
- 30 32. A retractor as claimed in claim 31 wherein a proximal portion of the retracting member comprises a sleeve extension of the inner wound engaging portion of the retracting member.

33. A retractor as claimed in any preceding claim wherein the sleeve is generally cylindrical.
- 5 34. A retractor as claimed in any preceding claim wherein the retracting member comprises a proximal reinforcing means.
35. A retractor as claimed in claim 34 wherein the proximal reinforcing means comprises a ring.
- 10 36. A retractor as claimed in any preceding claim wherein the retractor comprises a distal member coupled to a distal end of the retracting member for insertion into a wound opening.
- 15 37. A retractor as claimed claim 36 wherein the distal member is of a resilient material.
38. A retractor as claimed in claim 36 or 37 wherein the distal member comprises an O-ring.
- 20 39. A retractor as claimed in any preceding claim wherein the retractor comprises a platform for attachment of another device to the retractor.
40. A retractor as claimed in claim 39 wherein the platform is provided by the proximal member.
- 25 41. A retractor as claimed in claim 39 wherein the platform is provided by the clamp.
- 30 42. A surgical wound retractor comprising:-

a retracting member movable from an insertion configuration to a retracting configuration to retract laterally a wound opening; and

5 means for clamping the retracting member in the retracting configuration to maintain a wound opening retracted.

43. A retractor as claimed in claim 42 wherein the means for clamping comprises a clamp for clamping the retracting member to a proximal member located
10 externally of the wound opening.

44. A surgical wound retractor comprising:-

15 a distal anchoring member for insertion into a wound opening;

a connecting means having an inner wound engaging portion and an outer portion, the wound engaging portion being mounted to the distal anchoring member, the connecting means having an insertion configuration in which the inner wound engaging portion has a reduced radial dimension and a retracting configuration;
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an external guide means for the outer portion of the connecting means;

25 the external guide means being movable relative to the connecting means to shorten the axial extent of the connecting means and thereby bias the wound engaging portion of the connecting means into the retracting configuration to retract the wound opening laterally; and

a clamp for clamping the connecting means to the external guide means to maintain retraction of the opening.

5 45. A surgical wound retractor substantially as hereinbefore described with reference to the accompanying drawings.

 46. A method of retracting a wound opening, the method comprising the steps of:-

10 inserting a retracting member into a wound opening;

 locating a proximal member externally of the wound opening;

 moving at least part of the retracting member laterally to retract the wound opening; and

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 clamping the retracting member to the proximal member to maintain the wound opening retracted.

20 47. A method as claimed in claim 46 wherein the retracting member is clamped to the proximal member at one or more locations around the proximal member.

 48. A method as claimed in claim 46 or 47 wherein the method comprises the step of adjusting the location of clamping of the retracting member to the proximal member.

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 49. A method as claimed in any of claims 46 to 48 wherein at least part of the retracting member is moved laterally by moving the proximal member

relative to the retracting member to shorten the axial extent of the retracting member.

50. A method as claimed in claim 49 wherein the proximal member is moved
5 relative to the retracting member by gripping the retracting member and pulling the retracting member relative to the proximal member.

51. A method for retracting a wound opening using a surgical wound retractor
10 comprising a distal anchoring member, a connecting means having a wound engaging portion mounted to the distal anchoring member and an outer portion, an external guide means for the outer portion of the connecting means and a clamp; the method comprising the steps of:-

15 positioning the distal anchoring member to be retained inside a wound opening with the connecting means extending outwardly therefrom through the opening;

20 moving the external guide means relative to the outer portion of the connecting means to shorten the axial extent of the connecting means and thereby bias the wound engaging portion into a retracting configuration to retract the wound opening; and

25 clamping the connecting means to the external anchoring means to maintain retraction of the wound opening.

